

Work Order ID 60827

Friday, July 23, 2010 1:28:47 PM



Page 1

Item ID: D412-711-101

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Bubble Window

Start Date: 7/23/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

H

Date: 10-7-23

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								

D412-711-101

A

100



Thermoform

Thermoforming Machine

HAND FINISHING THERMOFORMING

0.00

Memo

0.00

Set up Machine as per folio FTA 077 and D711W program

(H) DL 10/07/03

110



Thermoform

Thermoforming Machine

HAND FINISHING THERMOFORMING

0.00

Memo

0.00

Cut Blanks to 36" by 39"

(X) BB 10/08/03

120



Thermoform

Thermoforming Machine

THERMOFORMING MACHINE

0.00

Memo

0.00

Thermoform as per Dwg. D412-711-101 using DT 9640 and Folio FTA 077
Dwg. Rev. *C* Folio Rev. *A*

(X) BB 10/08/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 60827

Friday, July 23, 2010 1:28:48 PM



Page 2

Item ID: D412-711-101

Revision ID:

Accept



Item Name: Replacement Bubble Window

Start Date: 7/23/2010 Start Qty: 1.00

Required Date: 7/30/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Setup Start

Stop

Run Start

Stop

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

1) Check Surface finish for undesired marks, voids, dimples etc. □ 2) Check depth of bubble to ensure conformity to drawing tolerances.

XI BB 10/08/03

140



QC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

XI BB 10/08/03

150



Thermoform

Thermoforming Machine

HAND FINISHING THERMOFORMING

0.00

Memo

0.00

1) Trim off excess flange material
2) Buff out any light scratches or
3) Etch part number and batch number

XI BB 10/08/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 60827

Friday, July 23, 2010 1:28:48 PM



Page 3

Item ID: D412-711-101

Revision ID:

Item Name: Replacement Bubble Window

Start Date: 7/23/2010 Start Qty: 1.00

Required Date: 7/30/2010 Req'd Qty: 1.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

8 BB
10/08/04

170



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1) Visually inspect for clarity, and proper formation.

8 10/08/05

(X)

180



Packaging

Packaging

Identify as per dwg & Stock Location: 80

0.00

Memo

0.00

Rec

CHG002

10/8/05 SF

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 4

Item ID: D412-711-101

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Accept



Item Name: Replacement Bubble Window

Setup Start



Start Date: 7/23/2010 Start Qty: 1.00

Stop



Required Date: 7/30/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

10/08/05 *[Signature]*

UMF 10-8-05

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

Friday, July 23, 2010 1:28:52 PM

Page 1

Work Order ID: 60827

Parent Item: D412-711-101

Parent Item Name: Replacement Bubble Window

Start Date: 7/23/2010

Start Qty: 1.00

Required Date: 7/30/2010

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-02-01 JLM
Manufacture in-house 10/06/28 DL

IPP Rev. B.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236 Plexiglass G .236"		Purchased	No				sf	145.0000	16	16			

Location

therm

Loc Qty

145

65

80

Loc Code

113571

115096

1 33/0/08/03

W/O:		WORK ORDER CHANGES					
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	60827
Description: Replacement Bulb Window		Part Number:	0412-711-101
Inspection Dwg: 0412-711-101 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "				
Shape Definition				
Texture Retention				
Material imperfections such as bumps, cracks, voids, scratching				

Measured by: _____ Date: _____

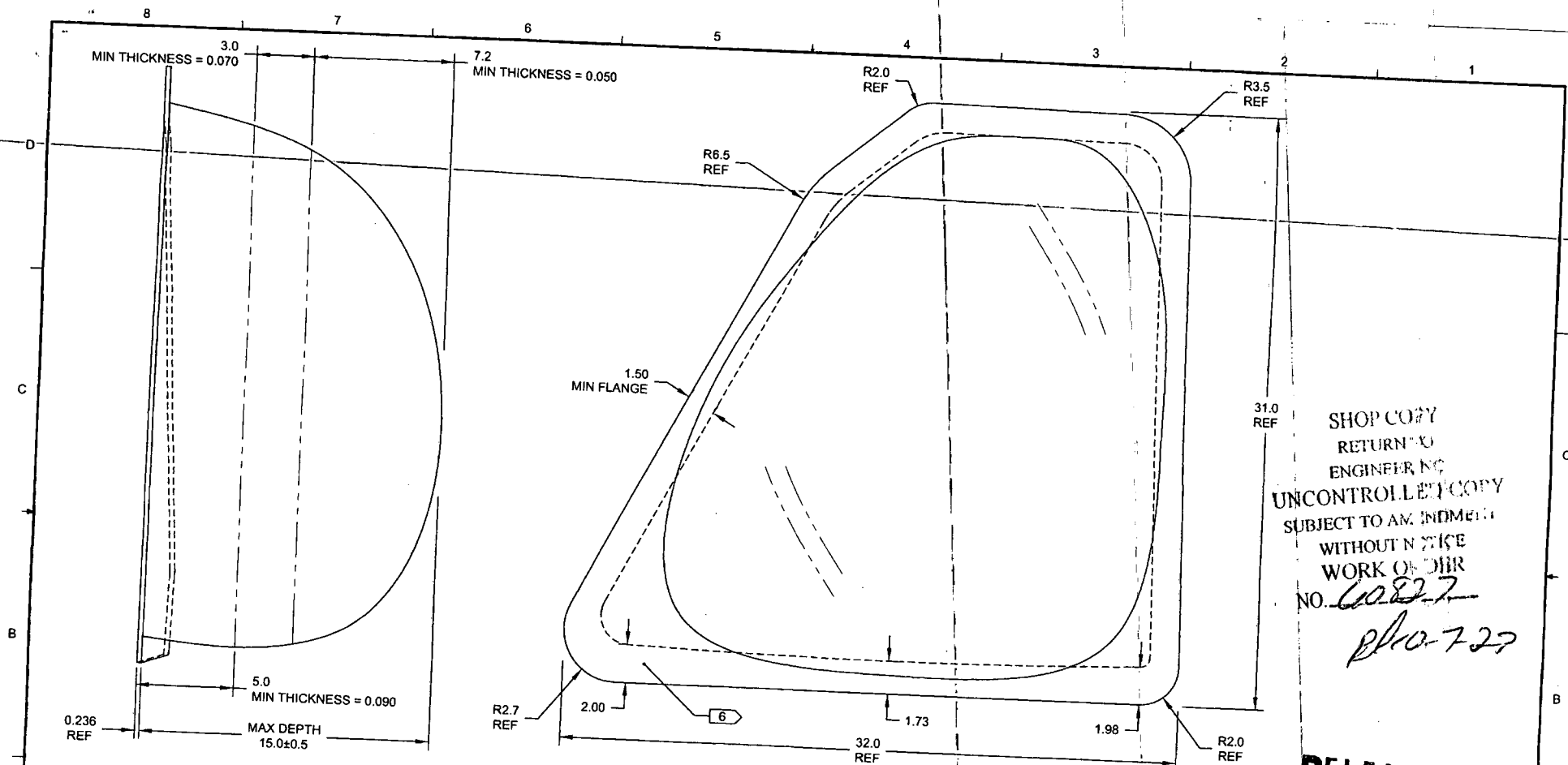
TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
32	REF	32.125				
31	REF	31				
.050	Min	.072				
.070	Min	.108				
.090	Min	.109				
15	±.05	15.06				

Measured by: <u>JB</u>		Date: <u>10/08/04</u>
Audited by: <u>S</u>		Date: <u>10/08/05</u>
Preliminary Approval: _____		Date: _____

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

10.04.14



D412-711-101 REPLACEMENT WINDOW

NOTES:

- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425, 0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
- 7) WEIGHT: 8.0 lbs
- 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

SHOP COPY
RETURN TO
ENGINEER NO
UNCONTROLLED COPY
SUBJECT TO AM. INDEMNITY
WITHOUT NOTICE
WORK OF OUR
NO. 60827
R10-727

RELEASED
2010-06-30
WP

REV.	NEW ISSUE	DESCRIPTION	MB	10.06.28
A			BY	DATE
DESIGN				
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	10.06.28			

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO. D412-711-101
REV. A
SHEET 1 OF 1
TITLE
REPLACEMENT WINDOW
SCALE
NTS
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